

REMARKS

Claims 5-8 stand rejected under 35 U.S.C. 102(a) as being anticipated by Ishida et al. (U.S. Patent No. 6,529,341 B1). In response, Applicants amended independent claim 5 to clarify that another clock pattern that is recorded as fine patterns is formed after the servo information pattern is recorded, and respectfully traverse.

Ishida teaches servo information and a clock that are simultaneously formed by magnetic transfer. Thus, the servo information is synchronized with the clock at the time of the magnetic transfer. Ishida does not teach a magnetic recording medium having another clock pattern recorded as fine patterns after the servo information pattern is recorded, as now recited in amended claim 5.

More specifically, the present invention first records a servo information pattern of preformat information, which is recorded by magnetic transfer. Thereafter, the present invention records another clock pattern that is recorded as fine patterns, which are finer than the servo information pattern. Thus, the fine patterns are formed after the servo information pattern is recorded. Since Ishida fails to disclose or suggest another clock pattern recorded as fine patterns, after the servo information pattern is recorded, withdrawal of the §102(a) rejection is respectfully requested.

Claims 1-4, 9-10, and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida in view of Tsuyoshi et al. (U.S. Patent No. 4,748,611). Applicants respectfully traverse the rejection because the cited references fail to disclose or suggest using a recording head for recording preformat information, as recited in independent claims 1, 3, and 9.

The Examiner correctly identifies on page 4, item 3 of the Office Action that Ishida does not expressly teach recording preformat information excluding the servo information on a magnetic recording medium by the recording head. Instead, the Examiner relies on Tsuyoshi as teaching this feature.

Tsuyoshi teaches that each sector 3 is divided into a pre-formatted area 31, which has been recorded in advance when the disc is fabricated. The pre-formatted area 31 includes a sector mark for indicating the waiting end of each sector, and identification signal for indicating a track address, a sector address, and a synchronization signal used for synchronizing a read-out clock for reading out the identification signal. (See Col. 2, lns. 8-17). However, Tsuyoshi fails to disclose or suggest using a recording head to record preformat information.

In contrast, one embodiment of the present invention uses a head to produce preformat information. As discussed on pages 14-16 of Applicants' specification, the reproducing head 11 reproduces patterns recorded on a magnetic disk 1 to generate reproduction signals of electric signals based on the patterns. These signals are further processed by a preamplifier 12, a delay device 13, Phase-Locked Loop circuit 10, phase comparator 14, loop filter 15, voltage-controlled oscillator 16, and a frequency divider 17. Then, a timing control circuit 18 outputs a signal outputted from the Phase-Locked Loop circuit 10, which outputs generated code information to a recording head 19. On the basis of a signal outputted from the Phase-Locked Loop circuit 10, the recording head 19 records a write-once clock pattern in a write-once clock area 72. The Phase-Locked Loop circuit 10

continues this process until the write-once clock pattern is synchronized with the transfer clock pattern.

After synchronization is accomplished, preformat information patterns excluding the servo information pattern is rewritten as fine patterns in the preformat information area 50. Accordingly, a recording head records the preformat information. Thus, the present invention improves the efficiency of formatting and realizes higher track density by recording servo information on a magnetic recording medium by a magnetic transfer and recording other preformat information by using a recording head. Since the cited references fail to disclose or suggest these features, any combination of these references also fails to disclose or suggest these features. For this reason, withdrawal of the §103 rejection is respectfully requested.

With respect to claim 2, the Examiner identifies the feature of “finding a pattern of the reproduced preformat information” as corresponding to Ishida’s disclosure, wherein a pattern of a master stamper is formed by utilizing a variety of fine processing techniques used to make a fine information signal. However, although the present application discloses to find reproduced information, the present invention could not further fine reproduce a signal, which is recorded by using the master stamper of Ishida. That is, the present invention is to be used when fine processing cannot be performed. If fine processing is available, then the present invention is not necessary. For this additional reason, Applicants respectfully request withdrawal of this §103 rejection of claim 2.

Claims 11-14 and 16-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida in combination with one or more of Tsuyoshi, Yamakoshi (U.S.

Patent No. 6,381,292), and/or Tanaka et al. (U.S. Patent No. 5,680,267). Applicants respectfully traverse the rejections.

Since claims 11-14 and 16-19 ultimately depend upon claim 9, they necessarily include all of the features of the associated independent claim plus other additional features. Thus, Applicants submit that the §103 rejections of claims 11-14 and 16-19 have also been overcome for the same reasons mentioned above to overcome the rejection of independent claim 9, and also because Yamakoshi and Tanaka fail to overcome the deficiencies of Ishida and Tsuyoshi. Applicants respectfully request that the §103 rejection of claims 11-14 and 16-19 also be withdrawn.

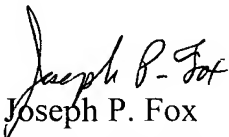
For all of the foregoing reasons, Applicants submit that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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